

What is claimed is:

1           1. A III group nitride system compound semiconductor  
2 light emitting element, comprising:  
3           a transparent substrate that is of a material except for  
4 III group nitride system compound semiconductor;  
5           a convex light trapping member that is formed directly  
6 or through a buffer layer on the surface of the transparent  
7 substrate; and  
8           a III group nitride system compound semiconductor layer  
9 that is formed on the surface of the transparent substrate;  
10          wherein the light trapping member has a refractive index  
11 substantially equal to that of the transparent substrate or  
12 closer to that of the transparent substrate than that of the  
13 III group nitride system compound semiconductor layer.

1           2. The III group nitride system compound semiconductor  
2 light emitting element according to claim 1, wherein:  
3           the transparent substrate is of sapphire and the light  
4 trapping member is of at least one selected from the group of  
5  $\text{Al}_2\text{O}_3$ ,  $\text{Eu}_2\text{O}_3$ ,  $\text{La}_2\text{O}_3$ ,  $\text{Sm}_2\text{O}_3$ ,  $\text{WO}_3$ , and  $\text{Y}_2\text{O}_3$ .

1           3. A method of making a III group nitride system compound  
2 semiconductor light emitting element, comprising the steps of:  
3           forming a convex light trapping member directly or  
4 through a buffer layer on the surface of a transparent  
5 substrate; and  
6           forming a III group nitride system compound semiconductor  
7 layer on the surface of the transparent substrate.

1           4. The method of making a III group nitride system compound  
2 semiconductor light emitting element according to claim 3,  
3 wherein the light trapping member has a refractive index  
4 substantially equal to that of the transparent substrate or  
5 closer to that of the transparent substrate than that of the  
6 III group nitride system compound semiconductor layer.

1           5. A method of treating the surface of a transparent  
2 substrate, comprising the steps of:  
3           forming a convex light trapping member directly or  
4 through a buffer layer on the surface of the transparent  
5 substrate; and  
6           forming a III group nitride system compound semiconductor  
7 layer on the surface of the transparent substrate.

1           6. A pretreated transparent substrate, comprising:  
2           a transparent substrate that is of a material except for  
3 III group nitride system compound semiconductor; and  
4           a convex light trapping member that is formed directly  
5 or through a buffer layer on the surface of the transparent  
6 substrate;  
7           wherein the light trapping member has a refractive index  
8 substantially equal to that of the transparent substrate or  
9 closer to that of the transparent substrate than that of the  
10 III group nitride system compound semiconductor layer.